

## FLORA OF PENIKESE, FIFTY YEARS AFTER.

Edited by I. F. LEWIS.

*(Continued from page 196.)***LIST OF SPECIES.**

## ALGAE.

## A. ALGAE OF FRESH WATER (BY TRACY E. HAZEN).

*Myxophyceae*

- Anabaena oscillarioides Bory, var. stenospora Born. et Flah.  
 Calothrix epiphytica W. et G. S. West.  
 Cylindrospermum majus Kuetz.  
 Microcystis sp.  
 Nodularia paludosa Wolle.  
 Nostoc sp.  
 Oscillatoria splendida Grev.  
 Oscillatoria tenuis Ag.  
 Oscillatoria sp.  
 Phormidium tenue (Menegh.) Gom.

*Heterokontae*

- Botryococcus Braunii Kuetz.  
 Tribonema bombycinum (Ag.) Derb. et Sol.  
 Tribonema utriculosum (Kuetz.) Hazen.

*Chlorophyceae*

- Ankistrodesmus falcatus Ralfs.  
 Asterococcus limneticus G. M. Smith.  
 Botrydium granulatum Grev.  
 Bulbochaete sp. (sterile).  
 Characium ambiguum Herm.  
 Chlamydomonas (three undetermined species).  
 Chlorella vulgaris Beyer.  
 Closterium Ehrenbergii Menegh.  
 Closterium sp.  
 Cosmarium (two species).  
 Elakatothrix gelatinosa Wille.

Glaucocystis nostochinearum Itzigs.  
 Herposteiron confervicola Naeg.  
 Keratococcus caudatus Pascher.  
 Micrasterias sp.  
 Microthamnion Kuetzingianum Naeg.  
 Microspora Willeana Lagerh.  
 Mougeotia sp.  
 Myxonema sp. (juvenile).  
 Oedogonium sp.  
 Oocystis sp.  
 Palmodictyon varium Lemm.  
 Pandorina morum Bory.  
 Platymonas subcordiformis (Wille) Hazen.  
 Pleurococcus vulgaris Naeg.  
 Protosiphon botryoides (Kuetz.) Klebs.  
 Scenedesmus brasiliensis Bohlin.  
 Sphaerella lacustris (Girod.) Wittr.  
 Spirogyra sp.  
 Staurostrum sp.  
 Stichococcus bacillaris Naeg.  
 Stichococcus flaccidus (Kuetz.) Gay.  
 Vaucheria sessilis (Vauch.) DC.  
 Zygnema sp. (sterile).

D. MARINE ALGAE<sup>1</sup> (BY W. R. TAYLOR).

*Myxophyceae*

- \*Anabaena torulosa (Carm.) Lagerh.
- Calothrix confervicola (Dillw.) Ag.
- \*Calothrix crustacea Thuret.
- \*Calothrix fusco-violacea Crouan.
- \*Calothrix parasitica (Chauv.) Thuret.
- Calothrix scopulorum (Web. et Mohr) Ag.
- \*Hyella caespitosa Born. et Flah.
- \*Isactis plana (Harv.) Thuret.
- \*Lyngbya aestuarii (Mert.) Liebm.
- \*Mastigocoleus testarum Lagerh.
- \*Oscillatoria margaritifera Kuetz.
- \*Phormidium papyraceum (Ag.) Gom.
- \*Rivularia atra Roth.

<sup>1</sup> Species marked with an asterisk were not found by Jordan.

*Chlorophyceae*

- \**Chaetomorpha Linum* (Fl. Dan.) Kuetz.
- Chaetomorpha Melagonium* (Web. et Mohr) Kuetz.
- Cladophora albida* (Huds.) Kuetz.
- \**Cladophora albida* var. *refracta* Thuret.
- Cladophora expansa* (Mert.) Kuetz.
- \**Endoderma Wittrockii* (Wille) Lagerh.
- Enteromorpha compressa* (L.) Grev.
- Enteromorpha intestinalis* (L.) Link.
- \**Enteromorpha Linza* (L.) J. Ag.
- \**Enteromorpha minima* Naeg.
- Enteromorpha plumosa* Kuetz.
- \**Gomontia polyrhiza* (Lagerh.) Born. et Thuret.
- \**Prasiola stipitata* Suhr.
- \**Protoderma marinum* Reinke.
- \**Rhizoclonium Kernerii* Stockm.
- Spongomorpha lanosa* (Roth.) Kuetz. var. *uncialis* (Fl. Dan.) Kjell.
- Ulva Lactuca* (L.) LeJolis.

*Phaeophyceae*

- Ascophyllum nodosum* (L.) LeJolis.
- Asperococcus echinatus* (Mert.) Grev.
- \**Castagnea virescens* (Carm.) Thuret.
- \**Castagnea Zosteræ* (Mohr) Thuret.
- \**Chorda Filum* (L.) Stackh.
- Chordaria flagelliformis* (Fl. Dan.) Ag.
- \**Desmarestia aculeata* (L.) Lamour.
- Desmarestia viridis* (Fl. Dan.) Lamour.
- Desmotrichum undulatum* (J. Ag.) Reinke.
- Dictyosiphon foeniculaceus* (Huds.) Grev.
- \**Ectocarpus confervoides* (Roth) LeJolis.
- \**Ectocarpus confervoides* var. *hiemalis* (Crouan) Kuckuck.
- \**Ectocarpus fasciculatus* Harv.
- Ectocarpus siliculosus* (Dillw.) Ag.
- \**Ectocarpus tomentosus* (Huds.) Lyngb.
- Elachistea fucicola* (Vellely) Fries.
- Fucus vesiculosus* L.
- Laminaria Agardhii* Kjellm.
- Laminaria digitata* (L.) Lamx.

- \**Laminaria Platymeris* De La Pyl.
- Leathesia difformis* (L.) Aresch.
- Mesogloia divaricata* (Ag.) Kuetz.
- \**Myrionema Leclancheri* (Chauv.) Harv.
- Petalonia fascia* (Mueller) Kuntze.
- \**Petalonia fascia* var. *caespitosa* (LeJolis) Hauck et Richt.
- \**Punctaria latifolia* Grev.
- Pylaiella littoralis* (L.) Kjellm.
- \**Ralfsia verrucosa* Aresch.
- \**Scytosiphon lomentarius* (L.) Lyngb.
- Sphacelaria cirrhosa* (Roth) O. Ag.

*Rhodophyceae*

- Acrochaetium virgatulum* (Harv.) J. Ag.
- \**Actinococcus subcutaneus* (Lyngb.) Schmitz.
- Anfeldtia plicata* (Turn.) Fries.
- \**Antithamnion cruciatum* (Ag.) Naeg.
- Callithamnion corymbosum* (Eng. Bot.) Ag.
- Ceramium fastigiatum* Harv.
- Ceramium rubrum* (Huds.) Ag.
- \**Ceramium strictum* (Kuetz.) Harv.
- Champia parvula* (Ag.) Harv.
- \**Chondria tenuissima* (Good. et Wood) Ag. var. *Baileyana* (Mont.) Farlow.
- Chondrus crispus* (L.) Stackh.
- \**Choreocolax Polysiphoniae* Reinsch.
- Corallina officinalis* L.
- Cystoclonium purpurascens* (Huds.) Kuetz.
- \**Cystoclonium purpurascens* var. *cirrhosa* Harv.
- \**Cystoclonium purpurascens* var. *stellata* Collins.
- Delesseria sinuosa* (Good. et Woodw.) Lamour.
- \**Erythrotrichia ceramicola* (Lyngb.) Aresch.
- Grinnellia americana* (Ag.) Harv.
- \**Hildenbrandtia Prototypus* Nardo.
- Lithothamnion Lenormandi* (Aresch.) Foslie (?).
- \**Melobesia LeJolisii* Rosanoff.
- \**Melobesia pustulata* Lamour.
- \**Nemalion multifidum* (Web. et Mohr) J. Ag.
- Phyllophora Brodaeii* (Turn.) J. Ag.

- \**Phyllophora membranifolia* (Good. et Woodw.) J. Ag.
- Plumaria elegans* (Bonnem.) Schmitz.
- Polysiphonia elongata* (Huds.) Harv.
- Polysiphonia fastigiata* (Roth) Grev.
- \**Polysiphonia fibrillosa* (Dillw.) Grev.
- Polysiphonia nigrescens* (Dillw.) Grev.
- \**Polysiphonia nigrescens* var. *Durkeei* Harv.
- \**Polysiphonia nigrescens* var. *fucoides* Harv.
- Polysiphonia urceolata* (Dillw.) Grev. var. *formosa* (Suhr.) Ag.
- \**Polysiphonia urceolata* var. *patens* (Dillw.) Grev.
- Polysiphonia violacea* (Roth) Grev.
- \**Polysiphonia violacea* var. *flexicaulis* Harv.
- Porphyra laciniata* (Lightf.) Ag.
- \**Rhododermis Georgii* (Batters) Collins.
- Rhodomela subfusca* (Woodw.) Ag.
- Rhodymenia palmata* (L.) Grev.
- Seirospora Griffithsiana* Harv.
- Spermothamnion Turneri* (Mart.) Aresch.
- Spyridia filamentosa* (Wulf.) Harv.

B. ALGAE OF BRACKISH WATER (BY TRACY E. HAZEN).

- Arthrospira Gomontiana* Setchell.
- Chlorella vulgaris* Beyer.
- Enteromorpha intestinalis* (L.) Link.
- Lyngbya aestuarii* (Mert.) Liebm.
- Oscillatoria amphibia* Ag.
- Oscillatoria margaritifera* (Kuetz.) Gom.
- Oscillatoria subuliformis* (Thw.) Gom.
- Oscillatoria* sp.
- Spirulina tenuissima* Kuetz.

(In addition to the algae listed, certain alga-like bacteria are common in the brackish ponds, such as *Beggiatoa mirabilis*, *Beggiatoa alba marina*, and *Lamprocystis roseo-persicina*.)

C. DIATOMS (BY PAUL S. CONGER).

- Achnanthes longipes* Ag.
- Actinocyclus crassus* W. S.
- Actinocyclus Ehrenbergii* Ralfs.
- Actinoptychus undulatus* E.

- Amphora Grevilleana* Greg.  
*Amphora obtusa* Greg.  
*Auliscus caelatus* Bail.  
*Auliscus caelatus* var. *strigillata* A. S.  
*Biddulphia Favus* (E.) V. H.  
*Campylodiscus Thuretii* Bréb.  
*Chaetoceros coarctatum* Laud.  
*Chaetoceros decipiens* Cl.  
*Chaetoceros didymum* E.  
*Chaetoceros* (*Bacteriastrium*) *varians* Laud. forma *furcata* Grun.  
*Cocconeis scutellum* E.  
*Coscinodiscus excentricus* E.  
*Coscinodiscus Oculus-Iridis* var. *Morsiana* Grun.  
*Coscinodiscus nodulifer* A. S. (Wide Variety).  
*Coscinodiscus radiatus* E.  
*Cyclotella comta* (E.) K.  
*Eupodiscus Argus* E. (= *Aulacodiscus Argus* (E.) A. S.).  
*Fragillaria hyalina* K.  
*Grammatophora macilenta* W. S.  
*Grammatophora marina* Grun.  
*Grammatophora serpentina* E.  
*Hantzschia amphioxys* Grun.  
*Hantzschia marina* (Donk.) Grun.  
*Hyalodiscus stelliger* Bail.  
*Licmophora flabellata* Ag.  
*Licmophora Lyngbyei* K.  
*Licmophora tinctoria* (Ag.) Grun.  
*Mastogloia exigua* Lewis.  
*Melosira Borreri* Grev.  
*Melosira sulcata* K.  
*Melosira sulcata* forma *coronata* Grun.  
*Navicula ambigua* Cl.  
*Navicula aspera* E.  
*Navicula Bombus* E.  
*Navicula borealis* E.  
*Navicula Brauni* Grun.  
*Navicula clavata* var. *caribaea* Cl.  
*Navicula dicephala* (E.) W. S.  
*Navicula didyma* K. & E.

- Navicula* (*Pinnularia*) *distans* W. S.  
*Navicula elegans* W. S.  
*Navicula exempta* W. S.  
*Navicula forcipata* var. *densistriata* A. S.  
*Navicula formosa* Greg.  
*Navicula fusca* Greg.  
*Navicula* (*Stauroneis*) *gracilis* E.  
*Navicula* (*Stauroneis*) *Gregorii* Ralfs.  
*Navicula Hantzschiana* Rab.  
*Navicula Henedeyi* W. S.  
*Navicula humerosa* Bréb.  
*Navicula interrupta* K.  
*Navicula Lyra* E.  
*Navicula Lyra* var. *dilatata* A. S.  
*Navicula Lyra* var. *elliptica* A. S.  
*Navicula maxima* Greg.  
*Navicula major* K.  
*Navicula nanella* P. C. sp. n.  
*Navicula notabilis* var. *expleta* A. S.  
*Navicula palpebralis* var. *angulosa* Greg.  
*Navicula peregrina* E.  
*Navicula quadratarea* A. S.  
*Navicula rhynchocephala* K.  
*Navicula Smithii* Bréb.  
*Navicula suborbicularis* Greg.  
*Navicula viridis* Nitzsch.  
*Navicula viridula* K.  
*Navicula Yarrensis* Grun.  
*Navicula* sp. indet.  
*Navicula* sp. indet.  
*Nitzschia closterium* (E.) W. S.  
*Nitzschia fonticola* Grun.  
*Nitzschia frustulum* var. *perminuta* Grun.  
*Nitzschia longissima* (Bréb.) Ralfs.  
*Nitzschia Sigma* (K.) W. S.  
*Nitzschia scalaris* W. S.—(wide variety).  
*Pleurosigma aestuarii* W. S.  
*Pleurosigma affine* Grun.  
*Pleurosigma elongatum* W. S.

- Podocystis Americana* Bail. (= *Podocystis Adriatica* K.).  
*Pseudo-eunotia doliolus* (Wall.) Grun.  
*Rhabdonema Adriaticum* K.  
*Rhizosolenia hebetata* forma *semispina* (Hensen) Gran.  
*Rhizosolenia setigera* Brightw.  
*Scoliopleura latestriata* (Bréb.) Cl.  
*Striatella unipunctata* Ag.  
*Surirella Mölleriana* Grun.  
*Surirella recedens* A. S.  
*Synedra Gaillonii* var. *macilentata* Grun.  
*Synedra Henedeyana* Greg.  
*Tabellaria fenestrata* (Lyngb.) K.  
*Trigonium alternans* E.  
*Tropidoneis Lepidoptera* (Greg.) Cl.  
 Number of genera—34; Number of species—96.

*E. FUNGI.*<sup>1</sup>

- Achlya* sp.  
*Cystopus candidus* (Pers.) Lev.  
*Daedalea quercina* (L.) Pers.  
*Empusa* sp.  
*Erysiphe cichoracearum* D. C.  
*Erysiphe communis* (Wallr.) Fr.  
*Exoascus Pruni* Fuck.  
*Fomes applanatus* (Pers.) Gillet.  
*Fuligo septica* Gmel.  
*Hypoxylon* sp.  
*Irpex* sp.  
*Naucoria* sp.  
*Ovularia obliqua* (Cke.) Oud.  
*Phyllosticta labruscae* Thuem.  
*Plasmopara viticola* (Berk. et Curt.) Berl. et DeToni.  
*Polystictus versicolor* (L.) Fr.  
*Puccinia malvacearum* Mont.  
*Puccinia Phlei-pratensis* Erikss. et Henn.  
*Puccinia triticina* Erikss.  
*Puccinia* sp. (on *Taraxacum*).  
*Puccinia* sp. (on *Cirsium*).

<sup>1</sup> The list of fungi here given is known to be incomplete, but offers some indication of the fungous vegetation found on the island.



*Septoria oenotherae* West.

*Uromyces trifolii* (Hedw. f.) Lev.

F. BRYOPHYTA (BY S. F. COOK).

*Aulacomnium palustre* Schwaegr. Small quantity mixed with *Brachythecium*.

*Brachythecium acutum* Sulliv. Typha and Tern Ponds.

*Bryum argenteum* L. General in sandy spots.

*Catherinea angustata* Brid. Fairly common on damp soil.

*Ceratodon purpureus* Brid. Universal on sandy, exposed spots.

*Dicranum flagellare* Hedw. Fairly common on damp soil.

*Ditrichum pallidum* (Schreb.) Hampe. Fairly common on damp soil.

*Lophocolea heterophylla*. One spot, under a moist bank, northeast corner of island.

*Mnium punctatum* Hedw. Small quantity mixed with *Brachythecium*.

*Polytrichum commune* L. General in open spots.

*Polytrichum juniperinum* Willd. Same.

*Polytrichum piliferum* Schreb. Same.

G. PTERIDOPHYTA (BY ALMA G. STOKEY).

\**Athyrium Filix-femina* (L.) Roth. South end of island.

\**Aspidium Thelypteris* (L.) Sw. Low wet places, Typha and Tub Ponds.

*Dennstaedtia punctilobula* (Michx.) Moore [*Dicksonia punctilobula* (Michx.) Gray]. Around reservoir.

H. SPERMATOPHYTA.<sup>1</sup>

*Pinaceae*

\**Pinus sylvestris* L. Hospital grounds.

*Typhaceae*

\**Typha latifolia* L. Typha and South Ponds.

*Najadaceae*

*Zostera marina* L. Harbor and elsewhere in shallow water.

(To be continued.)

<sup>1</sup> By John M. Fogg, Jr. Synonyms used by Jordan in brackets. Species marked with an asterisk not found by Jordan.